



PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Hiroshi Sukuki,)
et al.)
S.N.: 09/331,829)
Filed: June 23, 1999)
For: CURATIVES FOR EPOXY)
RESIN, CURING ACCELERATOR,)
AND EPOXY RESIN)
COMPOSITION)

Examiner: R. Sellers
Art Unit: 1712

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Lia H. Costello
Lia H. Costello, Legal Assistant

Box Patent Application
Hon. Commissioner of Patents
Washington, D.C. 20231

Dear Sir:

Please amend the above-identified patent application prior to examination thereof in the manner indicated below.

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PRELIMINARY AMENDMENT
(37 C.F.R. §1.114)

IN THE CLAIM:

Please cancel claims 1-3 and 5 as they are replaced with new claims 6-10.

Please add new claims 6-10, which are appended herein on separate sheets.

REMARKS

Regarding the Examiner's continued rejection of the claims under 35 U.S.C §103(a) in the advisory action of December 3, 2001, the '570 patent discloses that tetrakisphenol compounds have clathration ability, and the '711 patent shows clathrate as the host and curing compounds or curing accelerator compounds are useful agents for curing of epoxy resin; **HOWEVER**, one embodiment of the present invention claims that tetrakisphenol compounds can be an excellent curing accelerator. It is not known at all that a catalytic amount of tetrakisphenol compounds can accelerate the epoxy resin curing.

The second invention claimed is that of a clathrate compound comprising a tetrakisphenol compound as the host and curing or curing accelerate compound as the guest, which is an excellent agent for curing of epoxy resin.

The clathrate compound is crystalline compound, not mere mixture or formation. If tetrakisphenol compound have clathration ability, it can not be expected that the tetrakisphenol compound can or cannot include the EDA or 2MZ as guest compound.

Further, it can not be expected that this clathrate compound has a distinguishable pot life effect compared with that of the '711 patent clathrate. In addition, it can not be expected at all that this clathrate compound improves the hygroscopy and subliming property as an agent for curing. Moreover, using the tetrakisphenol compound as host compound, a catalytic effect of

curing acceleration by tetrakisphenol compound is provided synergistically.

In the Advisory Action, the Examiner further stated:

The evidence presented in table 1 on page 6 of the amendment after Final filed September 21 ... is inconclusive since the sample Nos. 53, 50 and 48 containing 1,1-bis(4-hydroxyphenyl)cyclohexane ... are not reflective of the closest prior art clathrate of bisphenol S and bisphenol A exemplified on page 15 of the Japanese patent.

... Although sample No. 54 contains 2-methylimidazole and bisphenol A in a 1:1 ratio, any difference in results could be attributable to the different curing agent. The accelerator: clathrate ratio of 2:1 in Sample Nos. 32 and 24 ... as well as the diverse type of curing agent or accelerator in Sample Nos. 24 and 10 ... could be responsible for the diverse pot lives.

As stated above, clathrate compound is crystalline compound, not a mere mixture or formation. So the ratio of the host and guest is peculiarly certain for an individual compound. The ratio of BPA (or BHC) and 2MZ is 1:1, but the ratio of TEP and 2MZ is 1:2. The clathrate compound which has 1:1 ratio can not synthesize. Therefore, the inventor (in Paper No. 16) compared the '711 patent's best mode compound with the invention clathrate which is most similar to that. As such, Applicants herein incorporate by reference the argument raised in the Remarks section of Paper No. 16.

Further, a pot life becomes short in relation to the addition of curatives. Although this test included twice the curatives than that of the '711 patent's clathrate since the ratio of host and guest is 1:2; this pot life is considered extremely better than that of the '711 patent's clathrate.

Namely, contrary to the Examiner's assertion that the evidence presented is inconclusive, it is in fact not inconclusive.

In addition, the Examiner states:

The showings with respect to the valid comparison of Sample No. 49 representative of the closest prior art versus Sample Nos. 10 and 11 reflective

of the claims are not commensurate with the claims regarding a sampling of the claimed molar ratio of clathrate:epoxy group of from 0.001:1 to 0.1:1. The molar ratio of the tested samples are not revealed in Comparative Example 5 ... to indicate whether they fall within the claimed molar ratio range.

The Examiner's opinion is a mistaken one. The indicated experimentations were carried out on the ratio of 1(resin):0.1(clathrate). This ratio is mole ratio, not weight. This resin(UVR 6410) is diglycidylether of bisphenol A.

100g of this resin is 0.66 mole, and the clathrate compound as curing agent is 0.066 mole. So, the ratio of the experimentation is consistent with the claim range.

CONCLUSION

The Examiner's attention is directed to the decision, *In re Anita Dembicza and Benson Zinbarg* 50 USPQ2d 1614, 1617-1618 (Fed.Cir. 1999) where the Court of Appeals for the Federal Circuit held:

"Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. See, e.g., *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998) (describing "teaching or suggestion or motivation [to combine]" as an "essential evidentiary component of an obviousness holding"); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) ("the Board must identify specifically . . . the reasons one of ordinary skill in the art would have been motivated to select the references and combine them"); *In re Fritch*, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (examiner can satisfy burden of obviousness in light of combination "only by showing some objective teaching [leading to the combination]"); *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) (evidence of teaching or suggestion "essential" to avoid hindsight); *Ashland Oil, Inc. v. Delta Resins & Refractories*,

Inc., 776 F.2d 281, 297, 227 USPQ 657, 667 (Fed. Cir. 1985) (district court's conclusion of obviousness was error when it "did not elucidate any factual teachings, suggestions or incentives from this prior art that showed the propriety of combination"). See also Graham, 383 U.S. at 18, 148 USPQ at 467 ("strict observance" of factual predicates to obviousness conclusion required). Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability - the essence of hindsight. See, e.g., Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985) ("The invention must be viewed not with the blueprint drawn by the inventor, but in the state of the art that existed at the time."). In this case, the Board fell into the hindsight trap.

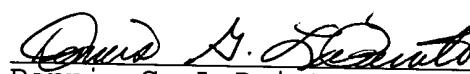
Even though the claims have been amended to increase their specificity, no estoppel has been created. See Mannesmann Demag Corp. v Engineered Metal Products Co.

A Notice of Allowance is earnestly solicited.

If the Office is not fully persuaded as to the merits of the Applicant's position, or if an Examiner's Amendment would place the pending claims in condition for allowance, a telephone call to the undersigned at (727) 538-3800 would be appreciated.

Very respectfully,

Dated: 2/15/02


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